REMARKS

Summary Of The Office Action & Formalities

Claims 1-3 and 8-11 are all the claims pending in the application. For the Examiner's convenience, Applicant is including an Appendix listing the pending claims.

Applicant thanks the Examiner enclosing a copy of initialed form PTO-1449 submitted with the Information Disclosure Statement filed on July 28, 2000 and a copy of form PTO-892 listing the Noguchi et al. reference.

The Examiner has withdrawn the objection to the specification under 37 C.F.R. § 1.75 in view of Applicant's last response.

Claims 2, 3, 9, and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form to include the limitations of the respective base claim.

Claims 1, 8 and 11 are rejected under 35 U.S.C.§ 102(e) as being anticipated by Noguchi et al. (USP 5,959,846).

Applicants respectfully traverse.

Claim Rejections - 35 U.S.C.§ 102

In rejecting claims 1, 8 and 11 in view of Noguchi et al., the Examiner reiterates the grounds of rejection set forth in the Office Action of December 13, 2002.

Applicants traversed this rejection in the last response of March 13, 2003, arguing that one distinguishing feature between the disclosure of Noguchi et al. and the recited method claims is that the modular surface mount circuit device disclosed in Noguchi et al. in Figs. 1-17 do not have "printed circuit film elements carrying a set of turns of one or more conductive tracks"

(claim 1) or "at least a first conductive track having turns on the first support to form a winding thereon" (claim 8).

In response to Applicant's arguments, the Examiner takes the following position:

> In Noguchi et al., the limitations of the set turns and conductive tracks were read as the radial connections 5b and electrodes 4, respectively. The examiner notes Figure 7 of Noguchi, which shows the same cross-hatched area for both the radial connections 5b and electrodes 4. This cross-hatched area for both the radial connections 5b and electrodes 4. This cross-hatched area for both of the radial connections 5b and electrodes 4 shows turns of 90° angles for each. Because each functions as a conductor in an inductive winding, the limitations of "printed circuit elements carrying a set of turns of one or more conductive track carrying a set of turns of one or more conductive tracks" (as required by Claim 8) are fully satisfied by Noguchi.

Office Action at pages 3-4. Applicant disagrees.

As a preliminary matter, Noguchi et al. does not use the same cross-hatched area for both electrodes 4 and radial connections 5b. Referring to Fig. 1, from which the cross-section in Fig. 7 is shown, electrodes 4 and radial connections 5b are clearly different (i.e., separate elements).

More significantly, the Examiner has not properly interpreted the relevant claim language in light of Applicant's disclosure. The Manual Of Patent Examining Procedure ("MPEP") dictates that "[d]uring patent examination, the pending claims must be 'given the broadest reasonable interpretation consistent with the Specification.'" MPEP Section 2111 (emphasis added). That is, the claim must be read in light of Appellants' Specification, not in a vacuum. The broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach. In re Cortright, 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999).

Here, however, the Examiner seems to have taken pains to construe the claims based on an unreasonable interpretation that is inconsistent with the Specification and inconsistent with the interpretation that would be made by those skilled in the art.

Contrary to the Examiner's position, neither electrodes 4 nor radial connections 5b can reasonable be considered as meeting the limitation in claim 1 of a "plurality of modular printed circuit film elements carrying ***a set of turns of one or more conductive tracks which form part of the at least one inductive winding***." When properly interpreted in light of the specification, one skilled in the art would certainly understand that the "turn" is not a 90 degree bend extending the conductive portion from a top surface to a side surface as shown in Figs. 1 and 7 of Noguchi et al. Rather, one skilled in the art reading Applicant's disclosure would readily understand that the turns are formed on a single side of the printed circuit element.

This difference is made even more explicit in claim 8, which recites a "winding," which one skilled in the art would understand to mean a complete or substantially complete turn, such as in a spiral or the like. Indeed, Noguchi et al. uses the term in a consistent manner (see, e.g., column 2, lines 29-61.)

Moreover, as disclosed in Figs. 10-12b, the 90 degree bend in the electrodes 4 is not formed until after the planar substrate 6a is cut to create an elongated ***through hole*** 3c for the terminal electrodes 4 (see claim 10 and column 6, lines 26-29). Therefore, Noguchi et al. fails to teach or suggest the step of "***cutting*** the rigid block laterally along the stacked assembly ***to expose*** an end for each of the one or more conductive tracks at a common alignment level and so that the exposed ends from the plurality of modular printed circuit film elements are flush with a surface of one face of the block, which cutting step is performed at least once" as recited in

Applicant's claim 1. Likewise, Noguchi et al. fails to teach or suggest the step of "cutting the block laterally along the stacked assembly ***to expose*** respective ends of the first and second conductive tracks at a common alignment level and so that the exposed ends are flush with one face of the block" as recited in Applicant's claim 8. That is, both claims 1 and 8 of Applicant's invention clearly require that the turns or windings are formed prior to the cutting step, and that the cutting step exposes one or more ends of the windings. This basic difference is not disclosed in the Noguchi et al. and is further evidence that the Examiner has adopted an improper interpretation of the claims.

Stated otherwise, since the elongated hole 3c in the structure of Noguchi et al. is cut prior to forming the terminal electrodes 4, there can be no cutting to expose these electrodes. Furthermore, in the cutting operation that segments the planar substrate 6a for mass production, there is no cutting of the terminal electrodes or the corresponding side end previously defined by the cut that formed the elongated hole 3c.

Applicant further distinguished the rejected claims in the last response of March 13, 2003 on the basis that Noguchi et al. does not teach or suggest the steps, respectively, of "molding an insulative material ***over the stacked assembly*** of the modular printed circuit film elements ***to constitute a rigid block***" (claim 1), and of "molding an insulative material ***over the stacked assembly to form a block***" (claim 8). The grounds of rejection point to the disclosure in Noguchi et al. of a ***layer deposition*** step in which a "sealing resin 30 of thermoplastic resin is deposited ***on the upper side by transfer molding***." Noguchi et al. at column 7, lines 46-47 (emphasis added).

In response to Applicant's arguments, the Examiner takes the following position:

> The applicants' further argue that Noguchi does not teach "molding an insulative material over the stacked assembly of the modular printed circuit film elements to constitute a rigid block" (as required by Claim 1, lines 10-11) and "molding an insulative material over the stacked assembly to form a block" (as required by Claim 8, line 10). The applicants' place a great deal of emphasis on the phrase of "rigid block" or "block".
>
> Again the Examiner most respectfully disagrees. It is noted that transfer molding as discussed by Noguchi, whether the insulative material is deposited or not, is still molding or a form of molding that applies the insulative material over the stacked assembly. The final structure of the stacked assembly, inclusive of the material, is what forms the block or rigid block. For example, after the insulative material of resin is applied by transfer molding, the resulting final structure is considered to be a rigid block. The insulative material would not stay in a state of transfer molding, but contributes to the state of the final structure of the overall assembly. Therefore, Noguchi fully satisfies the limitations of "molding an insulative material over the stacked assembly of the modular printed circuit film elements to constitute a rigid block" (as required by Claim 1) and "molding an insulative material over the stacked assembly to form a block" (as required by Claim 8).

Office Action at page 4. Applicant disagrees.

Again, the Examiner is adopting an unreasonably broad interpretation of the language "molding an insulative material over the stacked assembly of modular printed circuit film elements to constitute a rigid block," recited in claim 1 and "molding an insulative material over the stacked assembly to form a block," recited in claim 8. In particular, the Examiner fails to give proper patentable weight to the fact that the limitation is a process step the involves the ***formation of a block***. When properly construed by one skilled in the art and in light of Applicant's disclosure, it is clear that the molding step must include depositing the insulative material on more than one layer. In fact, when interpreted together with the cutting step, it is clear that deposition of sealing resin 30 disclosed in Noguchi et al. cannot meet the limitation of

Applicant's claims, since this material is not ***cut . . . to expose***. To the contrary, note the following disclosure in Noguchi et al.:

> Thus, in the embodiment, the unit of joined substrates coated with sealing resin 30 and resist layer 39 is formed without exceeding the height of the opposite electrodes 4. Consequently, the thickness of the modular circuit device can be further reduced.

Noguchi et al. at column 9, lines 21-25. Thus, Noguchi et al. would teach away from Applicant's claimed invention.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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APPENDIX LISTING THE PENDING CLAIMS

1. (previously presented): A method of obtaining a module including at least one inductive winding made up of a plurality of aligned modular printed circuit film elements that are combined to form the at least one inductive winding, which method includes the following steps:

- forming a stacked assembly by stacking the plurality of aligned modular printed circuit film elements, each of the plurality of modular printed circuit film elements carrying a set of turns of one or more conductive tracks which form part of the at least one inductive winding, and wherein the one or more conductive tracks terminate at or near an edge of the modular printed circuit film element,

- molding an insulative material over the stacked assembly of modular printed circuit film elements to constitute a rigid block,

- cutting the rigid block laterally along the stacked assembly to expose an end for each of the one or more conductive tracks at a common alignment level and so that the exposed ends from the plurality of modular printed circuit film elements are flush with a surface of one face of the block, which cutting step is performed at least once, and

- creating connections on the one face of the block with which the exposed ends are flush to selectively interconnect the one or more conductive tracks and to connect the one or more conductive tracks to connection means external to the module.

2. (previously presented): The method claimed in claim 1 wherein at least one of the stacked assembly has one or more supplementary modular printed circuit film elements which carry components and which have conductive tracks which terminate at a level corresponding to the common alignment level of the modular printed circuit film elements of said stacked assembly carry the sets of turns of the one or more conductive tracks in order to perform the molding, cutting and connection creation steps simultaneously on the stacked assembly, including the one or more supplementary modular printed circuit film elements which carry components.

3. (previously presented): The method in claim 1 wherein at least one orifice is formed in a same position in each of the modular printed circuit film elements to form a conduit in the stacked assembly enabling a core to be inserted through said stacked assembly.

4-7 (canceled).

8. (previously presented): A method of obtaining a module, comprising the steps of:

providing a first support and a second support;

forming at least a first conductive track having turns on the first support to form a winding thereon, wherein the first conductive track terminates at or near an edge of the first support;

forming at least a second conductive track having turns on the second support to form a winding thereon, wherein the second conductive track terminates at or near an edge of the second support;

stacking the first support on top of the second support to form a stacked assembly;

molding an insulative material over the stacked assembly to form a block;

cutting the block laterally along the stacked assembly to expose respective ends of the first and second conductive tracks at a common alignment level and so that the exposed ends are flush with one face of the block; and

interconnecting the conductive tracks on the one face of the block.

9. (previously presented): The method claimed in claim 8, further comprising the steps of:

providing a supplementary support that carries an electrical component and that has a conductive track terminating at or near an edge of the supplementary support;

prior to molding the insulative material over the stacked assembly to form the block, stacking the supplementary support with the first support and the second support so that the stacked assembly includes the supplementary support, the first support, and the second support, and so that the step of cutting the block laterally along the stacked assembly exposes respective ends of the conductive tracks on the supplementary support, the first conductive tracks and the

second conductive tracks at the common alignment level and so that the respective exposed ends are flush with one face of the block.

10. (previously presented): The method claimed in claim 8, wherein at least one orifice is formed in a same position in each of first and second supports to form a conduit in the stacked assembly enabling core to be inserted through the stacked assembly.

11. (previously presented): The method claimed in claim 8, wherein in the steps of forming the first and second conductive tracks, the first conductive track is formed so that the first conductive track terminates at the edge of the first support, and the second conductive track is forms so that the second conductive track terminates at the edge of the second support before performing the stacking step.